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## SEASONAL ANNOTATIONS ON TWO LONG ISLAND FISHES

In *Fishes Within Fifty Miles of New York City*, 1913 (Nichols. Proc. Linn. Soc. of N. Y., Nos. 20-23). *Raja eglanteria* is listed as occurring in "September"; and *Zoarces anguillaris* in "Fall and winter," with one indefinite August record. The following local data concerning these species in summer is then an addition to the writer's knowledge of their seasonal occurrence.

*Raja eglanteria* (Clear-nosed Skate).—Probably a not uncommon summer resident near New York and along the entire southern shore of Long Island. Long Island dates available are from June 14 (Moriches Beach) to October 2 (Easthampton). A specimen was taken at Cholera Bank (situated about ten sea miles off Long Beach), July 15, 1915, and presented to the American Museum of Natural History by Mr. Edward E. Wrissenberg, its collector. A fairly fresh specimen was found dead on Moriches Beach by the writer June 14, 1914. Mr. Wm. T. Helmuth writes me concerning the occurrence of the species near Easthampton in 1914 and 1915 as follows:

"The first record that I can give positively is July 26, 1914, when four were taken in a 'fish-trap' in Gardiner's Bay. Several were caught at every haul

thereafter, until the second of October, becoming most abundant during the first week of September and the last week of August. Their numbers did not diminish very noticeably during the remainder of the summer. In 1915 this species were found throughout the summer, beginning with the middle of July. One, also in late June."

*Zoarces anguillaris* (Eel Pout, "Conger Eel"). —I have a letter from Mr. Louis Wahl stating that this species was caught in 1915 throughout the year at the different fishing grounds off New York and that in June they were taken especially plentifully at Cholera Bank. Mr. Wahl seems perfectly familiar with *Zoarces*, which cannot readily be confused with any other fish, and I am convinced of the accuracy of the identification. The name "Conger Eel," however unfortunate its misapplication to *Zoarces*, is too firmly established for this fish among local fishermen to be ignored.

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#### NOTES ON NEW JERSEY FISHES, SEVERAL NEW TO THE STATE

*Cypsilurus nigricans* (Bennett). Head,  $3\frac{7}{8}$ ; D. I, 14; A. I, 9; scales, 48 in lateral line; 30 predorsal scales; 8 scales above l.l. to dorsal origin; snout,  $3\frac{1}{2}$  in head from upper jaw tip; eye,  $3\frac{2}{5}$ ; maxillary,  $4\frac{1}{5}$ ; interorbital,  $2\frac{1}{2}$ . Head wide above. Snout length half its width. Maxillary not quite to eye. Narrow band of fine conic teeth in each jaw. Lower jaw projects. Interorbital broadly concave. Rakers, 5+16; lanceolate, short. Back dusky, neutral tint with violet reflections. Head above similar, with distinct violet streak from upper hind eye edge to pectoral origin. Sides of head brilliant silvery-white, soiled or tinged dusky on trunk. Violet reflections conspicuous at caudal base and at ventral axilla. Iris

brilliant violet. Lips dusky. Dorsal largely jet-black, paler or soiled dusky-gray in front. Upper caudal lobe white, base blackish, lower lobe entirely jet-black. Pectoral largely black, axil with violet tinge, only lower edge and median portion of lower rays gray-white or whitish. Ventrals with outer  $\frac{2}{3}$  jet-black, outer and inner edges of fin whitish, median rays basally gray and this shade extends to black terminal blotch. Anal white, hinder outer terminal part black. One example, 172 mm. long, found on the beach in a tide-pool at Sea Isle City, September 14, 1915, by Master Edward N. Fox. This interesting fish had evidently been left stranded by the tide, and was alive when discovered. It had one pectoral fin extended in making an effort to escape, suddenly flying out of the pool and dropping helplessly on the sand a few rods distant. It is the first example ever recorded from the limits of the United States, and also an addition to the fauna of New Jersey. It is a well-marked species, readily distinguished by its blackish color and the white half of the high dorsal. At the same locality *Centropristis striatus*, *Chaetodipterus faber*, *Orthopristis chrysopterus* and *Leiostomus xanthurus* were also noted. At Ocean City a female *Dasyatis say* with two young, one *Rhinoptera bonasus*, July 7, and three on September 15, an adult *Istiophorus nigricans*, August 20, *Trachinotus carolinus*, eight *Coryphaena hippurus*, September 22, *Tautoga onitis*, and many large *Alutera schoepfii*, July 4, several of which bright golden-yellow. During August at Anglesea, *Euthynnus thynnus* of 1,080 lbs. weight, *Hemitripterus americanus*, *Sphyrna zygaena*, *Stenotomus chrysops*, *Balistes carolinensis* and *Prionotus evolans strigatus*. A few *Chaetodipterus faber* at Atlantic City and on September 25, a large *Lagocephalus laevigatus*. Two examples of *Epinephelus niveatus* are the first to be reported from New Jersey waters. Mr. W. J. Fox secured one 105 mm. long September 26, at Sea Isle City, and Dr. R. J. Phil-

lips, one 115 mm. long, September 29, at Corson's Inlet. Color largely deep dusky-brown with seven vertical rows of pale sky-blue round spots, caudal yellowish and pectorals pale. Both examples were angled on lines. May 15, I noted *Mustelus canis*, *Raja erinacea*, *R. ocellata*, *R. eglanteria*, *Pomolobus mediocris*, *Cynoscion regalis*, *Bairdiella chrysura*, *Spheroides maculatus*, *Paralichthys dentatus*, and *Achirus fasciatus* at Cape May Point.

In early September Messrs. S. N. Rhoads and J. R. Lippincott accompanied me on a trip to various streams in Salem County. In Salem Creek, at Daretown, we found: *Ameiurus nebulosus*, *Abramis crysoleucas*, *Erimyzon sucetta oblongus*, *Esox americanus*, *Fundulus diaphanus*, *Pomotis gibbosus* and *Perca americana*. In Alloway Creek, at Alloway: *Ameiurus nebulosus*, *Schilbeodes gyrinus*, *Abramis crysoleucas*, *Erimyzon*, *Esox americanus*, *E. reticulatus*, *Umbra pygmaea*, *Fundulus diaphanus*, *Aphredoderus sayanus*, *Pomotis*, *Boleosoma nigrum olmstedii*, *Morone americana* and *Achirus fasciatus*; Delaware River at Oakwood Beach; *Anchovia mitchilli*, *Fundulus heteroclitus macrolepidotus*, *Menidia menidia notata*, *Bairdiella chrysura*, *Pogonias cromis* and *Achirus fasciatus*. In Salem Creek at Sharptown: *Cyprinus carpio*, *Abramis*, *Notropis cornutus*, *Erimyzon*, *Ameiurus nebulosus*, *Anguilla rostrata*, *Esox reticulatus* and *Pomotis gibbosus*. In Game Creek: *Abramis*, *Pomotis* and *Micropterus salmoides*. Delaware River beach at Oldmans Point: *Alosa sapidissima*, *Dorosoma cepedianum*, *Anchovia mitchilli*, *Hybognathus nuchalis regius*, *Fundulus heteroclitus macrolepidotus*, *F. diaphanus*, *Pomotis*, *Roccus lineatus* and *Morone americana*. In the mill-pond at Swedesboro: *Abramis*, *Notropis whipplii analostanus*, *Lepomis auritus*, *Pomotis gibbosus* and *Micropterus salmoides*.

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THE PRESENT STATUS AND BREEDING  
SEASON OF THE GIANT TOAD (*BUFO*  
*AGUA*) IN BARBADOS, ST. VIN-  
CENT, TRINIDAD AND  
DEMERARA.\*

Not long ago a question arose regarding the present status, and breeding season, of the Giant Toad (*Bufo aqua*) in certain of the West Indian colonies, and in order to secure definite data on the subject I wrote to Barbados, St. Vincent, Trinidad and Demerara (British Guiana), receiving the following replies:

*Barbados*.—No mention of the occurrence of this toad (known locally as the "crapaud") is made either by Ligon (1673) or Hughes (1750). Schomburg in his "History of Barbados," published in 1848, includes it in his list of reptiles on page 679, with the following note: "I have been assured that this species, which is so common in Demerara, was introduced from there about fifteen years ago [i.e., about 1833]."

It is not known exactly when it was introduced into Antigua. It is now very common both on Barbados and Antigua, though on both islands it has become less numerous in recent years, owing probably to the introduction of the mongoose, which seems to prey upon the toad when pressed by hunger.

It certainly lays its eggs at least twice a year. In August last year (1914) ponds in Barbados were full of tadpoles, and again in February this year (1915) the same thing was noticed. (Extract from a letter from Dr. Francis Watts, C.M.G., Imperial Commissioner of Agriculture for the West Indies, Bridgetown, Barbados.)

*St. Vincent*.—The large toad (*Bufo aqua*) seems to be quite extinct here. I hear old people speak of them, but I fancy the mongoose must have

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wiped them out. (Extract from a letter from Mr. W. N. Sands, Agricultural Superintendent, St. Vincent.)

*Trinidad.*—Toads are plentiful, and about in the wet season, breeding then. The wet season has been very irregular lately. August-October is given as the most likely time for securing material of the young stages. (Information given in a letter from Mr. F. W. Urich, Entomologist to the Board of Agriculture, Trinidad.)

*Demerara.*—*Bufo agua* is extraordinarily common here and appears to breed about the commencement of the wet season, somewhere in November or thereabouts. (Extract from a letter from Mr. Gilbert E. Bodkin, Government Economic Biologist, Georgetown, Demerara.)

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#### ON THE PROBABLE ORIGIN OF THE TYPE SPECIMEN OF COPE'S *XANTUSIA PICTA*.

There can, I think, be no doubt that Cope's *Xantusia picta* is the same species as Stejneger's *Xantusia hensharwi*. Cope, however, stated that the type of *X. picta* was from Tejon Pass, California, a locality situated much to the north of the known range of *X. hensharwi*. I shall attempt to show that it is almost certain that Cope's type specimen really was collected at Poway, San Diego County, California, not very far from the type locality of Stejneger's species. The evidence, although circumstantial, seems clear. It is as follows:

1.—The type of *Xantusia picta* was sent to Cope by Mr. Rivers, who previously had sent Cope the type of *Xantusia riversiana*, and who was in charge of the natural history collections belonging to the University of California.

2.—In the early days of California museums the custom was to label specimens not with the exact locality of origin, but rather with the published habitat or range of the species.

3.—A short time after Stejneger described *Xantusia henshawii*, I visited the type locality, at Witch Creek, and obtained three specimens. Some time later Rivers, on seeing these specimens in my office, said:

"I see you have *Xantusia vigilis*. I sent a specimen to Professor Cope."

4.—Some years later Dr. Frank E. Blaisdell gave me a bottle containing several specimens of *Xantusia henshawii*, collected by himself at Poway, San Diego County, California. These he had labeled *Xantusia vigilis* and upon my asking where he had gotten that name for them, he said from Mr. Rivers to whom he had given one of the same lot of specimens a long time before.

It therefore seems almost certain that the type of *Xantusia picta* was collected by Dr. Blaisdell at Poway, San Diego, County, California; that it was sent by Dr. Blaisdell to Mr. Rivers; that it was wrongly identified by Mr. Rivers as *Xantusia vigilis* and labeled with the habitat of that species; and that Cope was thus led into error regarding the type locality of his supposed new species, *Xantusia picta*.

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#### A NOTE ON REPTILE COLLECTING.

Where reptiles are plentiful they are usually collected by means of a shotgun. One of the best that I have found for the purpose is built like a pistol, has 2 eighteen-inch, 22 and 44 gage barrels, and uses machine loaded cartridges with fine shot.

It will be found advantageous to carry specimens in a bag with a little corn meal or dry sand. On reaching camp they should be placed in water and left until all blood and foreign matter have soaked loose, when they should be washed and carefully spread out in a pan containing a quantity of 50% alcohol with which about one-twentieth of its bulk of formalin has been mixed. During the first few hours the specimens may be frequently turned over, and fresh fluid injected through abdominal incisions previously made. One incision is usually sufficient for a lizard, but several are necessary for a snake, and one should invariably be made in the tail just posterior to the anal opening. In one or two days the material with the possible exception of certain snakes is sufficiently cured to be closely packed with fresh formalin (about 2%) in glass fruit jars or small metal cases. Fine excelsior placed between specimens will prevent rubbing, assist in keeping them moist if the container should leak, and moreover things packed thus will not arrive at the museum distorted and broken as sometimes happens when they are wrapped with cloth.

Formalin is recommended only as a temporary preservative, and it should not touch specimens intended for osteological study. In all cases they should be removed from it as soon as possible. It is almost indispensable, however, in field work when one must go lightly equipped.

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